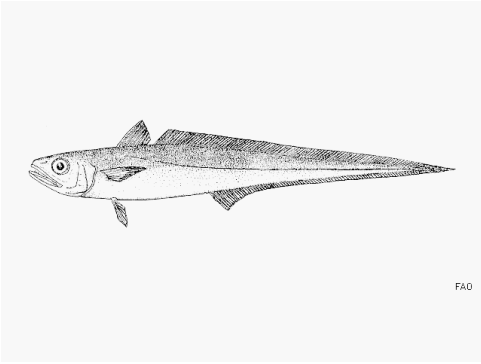


# Patagonian grenadier Argentina

Fishery:  Argentina  Argentina  Falkland Islands (malvinas)  Bottom trawls

## IDENTIFICATION



### SCIENTIFIC NAME

*Macruronus magellanicus*

### SPECIES NAME(S)

Patagonian grenadier, Hoki

### COMMON NAMES

merluza de cola (Spanish)

### STOCK IDENTIFICATION

Patagonian grenadier or Hoki is distributed in the Southeast Pacific and Southwest Atlantic, from southern Chile to Argentina. Studies suggested high mixture between Pacific and Atlantic populations (Schuchert et al., 2010; Niklitschek et al., 2013) and more recent studies concluded that hoki of the Southwest Atlantic is a unique population group (stock) distributed all around the cone of South America. Recent studies undertook by INIDEP did not find clear evidence of different populations within the Atlantic or between the Atlantic and Pacific (information compiled in [Morsan et al. 2019](#)). There have been joint workshops between Chilean and Argentine research institutes but there are still two separate assessment units: Patagonian grenadier - Argentine and a [Patagonian grenadier - Chilean](#).



### RELATED LINKS:

- [Consejo Federal Pesquero \(CFP\)](#)
- [National Fishery Research and Development Institute \(Argentina\) \(INIDEP\)](#)

## ASSESSMENT

### Strengths

- Stock structure has been studied; evidence suggests a single Chilean-Argentine stock but more studies are needed.
- An external peer review of the assessment model in the SW Atlantic was conducted; most reviewer's recommendations have been incorporated in last assessments.
- A harvest control rule (HCR) has been proposed and approved. This HCR was considered robust by a recent study that applies a Marine Strategy Evaluation (MSE) approach.
- Fishing mortality estimates were reported in the last stock assessment.
- Misreporting and discarding are assessed, and up-to-date estimates are used to correct the nominal catches and obtain total catches time-series.
- Since 2001, catch limits have gradually decreased and the lowest value was set for 2017-2019.
- A new scientific survey was undertaken in March 2019 after many years of gap.
- Estimated catches are below the set Total Allowable Catch (TAC) and advised limits.
- Fishing vessels are equipped with VMS (since 2004) and must take an onboard observer; dockside monitoring is also performed.
- Impacts on bycatch species, protected species, and benthic ecosystems are being studied, and several mitigation measures are being implemented (streamer lines, marine protected area in key fishing grounds, etc).
- The MPAs network was extended with 2 new areas and a new national action plan for sea turtles was developed.

### Weaknesses

- Research surveys to estimate abundance indexes have been discontinued since 2010, increasing uncertainty in stock assessment and stock status.
- There is no evidence that there are separated stocks within the South Atlantic and South Pacific populations, but it is assessed and managed independently by Argentina and Chile. The South Pacific population is considered as depleted for several years.
- Recruitment is associated with higher levels of uncertainty in recent years.
- New limit and target biomass reference points were defined at levels not supported by the stock-recruitment relationship series. Both reference points were set below the lowest observed estimates, where the risk of compromised reproductive capacity is unknown.
- Sources of uncertainty mentioned above require a more precautionary harvest strategy, contrary to the lower recently adopted biomass reference points.
- Discards of the target species represent about 14% of the total catches although catches and discards together are still below the set TAC.
- Stock status of an important bycatch retained species Patagonian cod (*Saliota australis*) is unknown and catches are in a decreasing trend since 2013.
- Catches of bycatch retained species Patagonian toothfish (*Dissostichus eleginoides*) are above the set TAC of several years.
- Concerns on cumulative impacts from bottom trawling in small hotspots have been raised.

## SCORES

### Management Quality:

Management Strategy	Managers Compliance	Fishers Compliance
≥ 6	10	10

### Stock Health:

Current Health	Future Health
≥ 6	≥ 6

## FIPS

No related FIPs

## MSC

No related MSC fisheries

## RECOMMENDATIONS

### RETAILERS & SUPPLY CHAIN

- Work with managers and scientists to implement an independent review of the quality of the key input data that drive the stock assessment, and in particular whether the catch-per-unit-effort time series is an adequate

index of the stock.

- Support managers and INIDEP to reinstate the periodic fishery-independent biomass surveys for Patagonian grenadier, to better inform the assessment model.
- Ensure that the work to address the harvest control rule (HCR) and reference point-related MSC certification condition fully explores and justifies the choice of the HCR and the reference points in a rigorous and transparent manner.
- Ask fishery managers to further explore the need to share information and coordinate stock assessments with Chile.
- Work with the fishery to reduce catches of Patagonian toothfish to ensure that catch limits are complied with.
- Work with scientists and managers to determine the stock status of Patagonian cod, establish catch limits, and ensure catch compliance.
- Ask managers for increased implementation and monitoring and compliance with recently tested mitigation measures for seabirds.
- Monitor the progress in closing out conditions placed upon the MSC certification of the fishery and if agreed timelines are met. Offer assistance in closing conditions where possible.